

### **REMARKS**

This paper is in response to the September 25, 2009 Office Action. Applicants respectfully request reconsideration of the rejections in that Office Action. Concurrently filed with this paper is a fee transmittal to cover the extension of time fee (one month).

Applicants understand that the Åkerstedt abstract being relied on is from an article entitled "The Three-Process Model of Alertness and Its Extension to Performance, Sleep Latency, and Sleep Length" published in 1997 in the Chronobiology International, Vol. 14, Issue 2, pp. 115-123.

#### **I. Claim Amendments**

Claims 1-3, 35, and 37-42, and 44-46 are pending in this application.

Claim 2 has been further amended to provide a temporal aspect to the operation of the means for determining. Claim 3 has been amended to address the 35 U.S.C. §112 rejection and to incorporate claim 43. Claims 39-41 have been amended to be in independent form. Claims 39 and 40 incorporate claim 2 from the previous Amendment in its entirety. Claim 41 incorporates most of claim 2 as submitted in the previous Amendment except for the display, which is recited in new claim 46 that depends from claim 41. Claim 42 has been amended to correspond to the amendments in claim 3. Claim 43 has been cancelled. New claim 45 is similar to allowed claim 1 and is written based on the Examiner's reason for allowance of claim 1. No additional claim fees are required, as the patent application previously had nine independent claims in it.

#### **II. 35 U.S.C. §112 Rejection**

Claims 3, 42 and 43 have been rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly

claim the subject matter which Applicants regard as the invention. Applicants respectfully traverse this rejection with respect to claims 3 and 42, and submit that it is moot with respect to cancelled claim 43.

Claims 3 and 42 have been amended to recite a "computer program product for predicting a cognitive performance level of an individual" having different program instructions to perform different functions. Applicants respectfully submit that these claims are definite.

Applicants respectfully request that this rejection be withdrawn as overcome.

### **III. 35 U.S.C. §102(b) Rejection**

Claims 2, 3, 39, 41, and 43 have been rejected under 35 U.S.C. §102(b) as allegedly anticipated by Åkerstedt, *The Three-Process Model of Alertness and Its Extension to Performance, Sleep Latency, and Sleep Length*, Chronobiology International, 14(2), 115-123 (1997) (hereinafter "Åkerstedt 1997"). Applicants respectfully traverse this rejection with respect to the pending claims, and respectfully submit that it is moot with respect to claim 43.

Claim 2 recites "means for determining a cognitive level of a person based on the person's sleep/wake data at predetermined fixed intervals having an identical time period". Applicants respectfully submit that Åkerstedt 1997 does not make a determination of a cognitive level of a person at predetermined intervals, but instead determines the cognitive level when sleep changes to wake and wake changes to sleep. See FIG. 1 and description of the figure.

Claims 39 and 41 have been amended to include the recitation of claim 2 as that language existed prior to this Amendment.

Claim 39 recites "said sleep/wake data contains a series of epochs where each epoch is classified as sleep or wake". As discussed in paragraph [0079], "epochs are the same length, but that length could be of any time period as dictated by restraints of the method and apparatus used to collect data and/or the desired precision of the sleep/wake pattern." The Office Action states that Åkerstedt 1997 is understood as disclosing two epochs, where one epoch is sleep time and the second epoch is wake time. This interpretation of epoch is contrary to the way epoch is used in the current application as there is nothing in Åkerstedt 1997 to indicate that the person will be awake for the same amount of time as they are asleep and have these periods alternate. Another problem to the way epoch is used in the Office Action is that it also assumes that when the person is sleeping that there are no interruptions to the person's sleep such as sleep apnea or getting up and using the bathroom. See Åkerstedt 1997, pp. 116-7, "Possible Factors of a Model" section for additional examples. Therefore, it is respectfully submitted that Åkerstedt 1997 does not disclose this recitation of claim 39.

Claim 41 recites "wherein the person's sleep/wake data includes a series of epochs where each epoch is classified as sleep or wake". As explained in connection with claim 39, Åkerstedt 1997 and the interpretation given to it in the Office Action is not able to anticipate this recitation and use of epoch.

Claim 3 recites "the person's sleep/wake data that includes a series of epochs where each epoch is classified as sleep or wake". The similar rationale as discussed above in connection with claim 39 also applies for patentability of claim 3.

Applicants respectfully request that this rejection be withdrawn as overcome.

**IV. 35 U.S.C. §103(a) Rejection**

Claims 37 and 38 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Åkerstedt 1997 combined with official notice. Applicants respectfully traverse this rejection.

Applicants respectfully submit that claims 37 and 38 are patentable over Åkerstedt 1997 combined with the official notice as stated in the Office Action based on their dependency from claim 2. 35 U.S.C. §112, fourth paragraph.

Applicants respectfully request that this rejection be withdrawn as overcome.

**V. Conclusion**

Applicants acknowledge the Examiner's indication that claims 1, 35, and 44 are allowable and that claims 40 and 42 would be allowable if rewritten in independent form. Claim 40 has been rewritten in independent form.

In view of the foregoing remarks, it courteously is urged that all the claims are allowable and that the application is in condition for allowance. If the Examiner believes that the prosecution could be advanced through a telephone conversation, then the Examiner is invited to telephone the undersigned. Favorable action in this regard earnestly is solicited.

Respectfully submitted,  
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